1992 BRAZIL NOTES

March 29 Left Quito Hotel bill on VISA
Baggage tips - 3000 s
Taxi to airport - 3000
Departure tax at airport - - - - - - - - - - - - - - $25.00

March 30 Airport tax in Rio - - - - - - - - - - - - - - - -
Arrived in Brasilia met by Victor Becker stayed at house

March 31 Collected at Planaltina (east of Brasilia) 1000 m
Ended roll begun in Ecuador continued in Brasilia
Next roll ditto through #26

April 1 Started drive SE in Victor's car with son
Stop 1 10 km N Paracutu 900 m cerrado scenes, mistletoe and farm scene
Stop 2 50 km SE. Trevo Marias CV mistletoe
Spent night at Victor's sister's house NOVA LIMA
about 20 km SE of ~~Belo~~ Belo Horizonte

April 2 collected during AM at Nova Lima, dense low forest
Then drove to CAÇA CA and old monastery in hills
MV light in rain embrids in rock ledges and old walls

April 3 drove to Reserva Forestal de Linhares 40 m
enroute 2 cultures of Archembia 20 km E. MANAHUACU
patch of mtn forest on bank naked silk 650 m
Melanostoma shots near IBATIBA 700 m Esp. Santo
= genus TIBOUCHINA (no sun)
in sun at Venda Nova 900 m

April 3-10 at RESERVA FORESTAL DE LINHARES ESPIRITO SANTO 40 M
20 km N of Linhares

April 10 went to Reserva RUSCHI near Santa Teresa
2 embrid colonies, one on lichens on dense bamboo another in dead bark edge of forest. Strange forest along river many bromeliads, many photos second roll to #26 Embrids seem to be absent.

April 11 went to Victor's brother's house at CAMACÃ, BAHIA
a town in damp forested hills cacoa center
Archembia on large, old trees with coarse, flakey

OVER

bank in cacao plantation, 125 m adults present, eggs in mounds
silk - covered

CAMACÃ 125 m ~~Sop~~ Bahia

April 11 – 14 Bahia: ~~Cacaroa~~. Most collecting at 400 m in forest just above cacao Zone only one embiid in road bank. Also collected one night at microwave tower at 800 m and one night in clearing of native forest at 400 m

April 15 Shot stop in scrub evergreen forest in cacao and pasture Zone. Much wood cutting one large embiid colony on shaded bank single shot 8" x 12" dirty silk beneath which labyrinth of nymph galleries of checkered species large culture; 10 km SE. JEQUIÉ 375 m
Night collecting 20 km SW " at 400 m
photo at scene "

April 16 Collected Archembia? Oncocembia biarmata on road bank and stub sapling stumps at 500 – 600 m along microwave road in dense evergreen, low forest Zone. Photos of tarantula hill scene, cactus, spider etc. " of ranch + cactus 5 km SW J. Embiid (above) at 20 km SW J at 500-600 m.
Collected in evergreen forest shading cacao. Numerous Archembia? in clean white galleries. Also good culture of checkered sp. in moss bank etc. Dirty silk, some lavender. Huge old colonies. a variant of biarmata
Night at Vitoria brother's house

April 17 to Linhares County 30 km
Village on river Mascote, Rio Pardo S. Camacã

18 at 20 km N Linhares
19

April 20 photo church Santo Amaro
" Mabarotona just " " 400 m
Embiids in moss K 126 1000 m
IBATIBA K 138
house in dale 168
Pequeya K-4
Embiids dead trunk K-10
town MANHUAÇU

April 20 Church photo Santa Isabel
Photos Melanoctona Just E " " 400 m
Embiids in hanging dead moss on rocky damp
road bank K 126 1000 m ITATIBA Km 158
House in dale 168
PEQUEYA K-1 Minas Gerais
Embiids on dead trunk edge of dense forest K-10
Town photo MANHUAÇA
Night in Nova Lima light collecting 900 m

April 21 embiid CURVELO 700 m debris
2 shots Rio Abaeté 500 m
Scene & plants to end 825 m
Cristalina, ~~Goiás~~ (State) GOIÁS

April 22 Collected at Planaltina day & nite
April 23 Collected in Serra dos Pireneus 1000 m
lily-like plant with big flower Vellozia
Velloziaceae
Near Pirenopolis (old town stone slabs)
about 100 km W Brasilia

April 24 Stayed in Brasilia went to zoo - poor!
Photographed Merian's book plates
British volume xeroxed for $192 folio $1.00/page
Lunch ---------- $5.50
Purchased 2 Maldonado Diaz naive paintings $260.00
April 25 To airport at 4:30 am ----------
Departure tax ---------- $16.00
Chocolate with last Brazil money $7.50
Arrived Quito at 4:30 p.m taxi 4000 S
Tip at hotel 1000 S
April 26 (Sunday) QUITO
Purchased 3 large naive paintings ---- $270.00

Note Victor paid all expenses in Brasil to be reimbursed at $1000.00

Parque Nacional de Ataiaia 1999

III - 18 Ceara

views from Hotel
painting inside
Road photos
Stop 1 rock cliffs on
escarpment just W of
~~Crato~~ CRATO, Ceara, 805 m
Natural forest reserve CE-090
Large brown Fo (3-4) and
1st instar brood, each in large
white patch colony. On shaded
side of rd colonies extend
into crevices.
Culture also contains
1-2 small sp. incl 1
pale pemalt of

Lunch food in ~~Crato~~ Araripe
ARARIPE
wall painting
shops, scenic

Small culture
nr Santana do Carisi
750 m in road cut
red sandstone small webs
under small slabs 1 juv
seen

Night in Picos

Picos

19th
Picos small culture
flat stones NE 5 km
220 m small, 1 large
roll ends
St scenic in Picos
to end of roll
Palm + cliff scene
girls washing

Stop 2
Young embrids and larger
2 spp.? 1 ♂ caught
Rocks in shade of thick
"mesquite" Hippolates bad
photos of village

nite in ~~Barbalha~~ cheap hotel Calvrome

20th
Boa viage
565

Madalena 600
Sao Jose da Macaoca
NW side trip from 614
photos along road goats
Village ~~ITAPIRA~~ 400
641 Lagoa do Mato
photos 20 Km N
2 cultures under stones
and old bark of giant
cactus. Adult ♀ black
white intersegmental bands
young red mahogany.
1 ♀ with 1st instar
Rocky hill nr creek
with big tree cactus
fresh heavy rain

Caboclo
sitio

III-21
Fortaleza to Crateus
nite in Spazio Hotel
92 25347 260 m

III-22
37 km NE TAUA 425 m
Embiids under small stones
webs common in twiggy debris
shade of small trees
good culture, 2 ♂
Photos of house and
family and forest scene
recent rain + Scarites

III-22-23-99
Picos 740 200 m
24 km SW Picos Huge rocks
large gated colonies genus?
1-2 small species
poor cultures.

III-23
nite of III-22 spent in
Picos Hotel (again)
returned to rocks
at GATUNANO
Embiids on and in
rough bark of huge tree
photo of tree etc
Hotel Fathers
+ Augustinos at
Mozaro do Pinhui
Fancy Hotel at
FLORIANO on river

III-24
ITAUEIRAS
179
photo of truck
211 termite mds

CANTO DO BURITI
26.243 Km
photo of churrascaria
Church store etc

340 Cliff in distance
20 Km N São Raimundo
das Mangabeiras 500 m

Cliff stop 346
400 m
2♀ under logs in garden
house interior

Casa Nova 605
Embiids under small QUARTZ rocks in
shade of small trees III-24
100 km SW Petrolina
(man with leather cap)

III-25
from Petrolina

Orocó, PE
~~26.84~~
26,824 km
Caatinga 300 m

989 Salgueiro

III-26-99

Stayed 2 nites in Hotel
Delay in money change
Collected in forest reserve in
Serra dos Cavalos 800 m
SW of ~~Cara~~ CARUARU 300 m
Good forest but no epibiids
except possibly a tiny toad
Large webs on road bank
below virgin forest. Dry
conditions 2-3 adult
jet black, shiny ♀s
white-tipped antennae
many juv incl penult
♂s — photos of host
Went to craft market
in PM, photos incl
cute girl
ROSELY MARIA DOS SANTOS
OVER

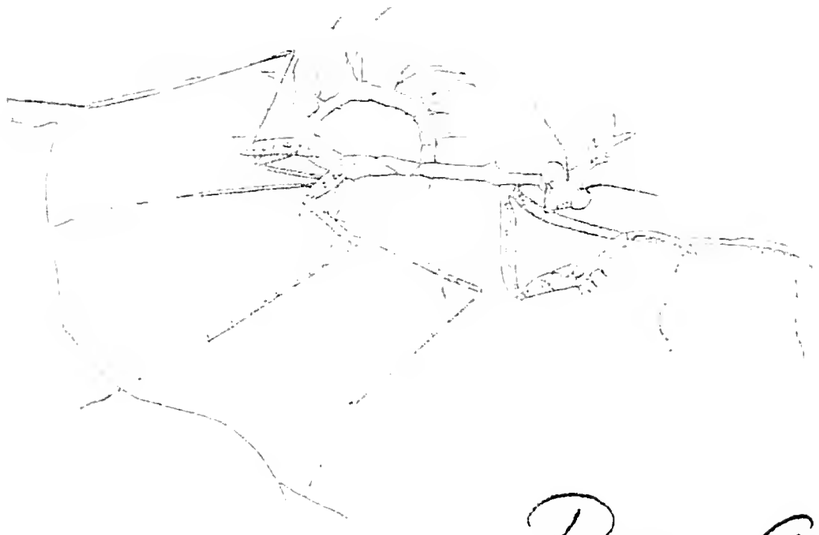
III-27

Crooked Village RUA DA ~~PATH~~ PALHA
near
BARRA DE GUABIRABA
425m near
Village near forest
545 Rio Formoso
950 m

white sagotic palm
"Atun Ucsha"
Asplundia sp
Cyclanthaceae
Det Nicon

Jatun Sacha

Dr. T. Cavalier-Smith
Department of Botany
University of British Columbia
Vancouver, B.C.
V6T 1Z4, Canada
(Tel: (604) 822-4906)



EDWARD S. ROSS

c/o CALIFORNIA ACADEMY OF SCIENCES
GOLDEN GATE PARK • SAN FRANCISCO, CALIFORNIA 94118

OFFICE (415) 750-7229
OFFICE FAX (415) 750-~~7106~~ 7228

August 17, 1999

Dear Adriano:

This is a letter I've been postponing too long. I usually go to my research table in preference to "paper work." If I kept up with correspondence, I would do no research!

The shipment of my excess baggage arrived in good condition — many thanks!

I enclose the following:

(1.) Kodachromes for you and/or your assistant/or Ricardo. Distribute these as you wish.

(2.) A set of mimicry slides for Ricardo's wife. Please mail these to him.

(3.) An envelope containing correct labels for the holotypes presented to your museum. Place these on the appropriate slides as per instructions on the envelope.

(4) Some color prints for the fazenda family. I don't have the address. You recorded it.

(5) Two prints for the nice girl in the Carnarn market. Address on envelope. But sent to her from within Brasil. If she wants a new daddy, I will adopt her!

I would very much appreciate the promised list of localities we visited. In some cases I failed to make my own records. The list is important because new species may be involved.

HOME (415) 383-5343
HOME FAX (415) 381-9214

My cultures are doing well and I am "harvesting" males of several new species. The very large species from the cliff west of Curitiba and from 24 km W of Pecos are still unknown new genera — no adult males yet, but perhaps within a month.

I regret that we couldn't have spent more time in certain places. The Mina do Uranio place deserved more attention — at least four species have developed in the cultures, one of which I named from the Belém area (it may, however, be at least racially distinct, considering the distinct ecology and distance).

In some cases, due to the small sample, only virgin females matured. In the south, including the Power House, many cultures developed one of my early species, Oligembia unicolor, which I described from Nova Teutonia

It is wonderful to bring home cultures. Almost all of the embiids I collected would have been worthless had I killed and preserved specimens in the field. All the more reason for Brazil opening its doors to a specialist like me.

I certainly enjoyed our time together. It was costly, however, including the Quito – Rio trip, I spent more than $7,000 in one month!

Hope to see you again someday. Best regards to your family.

Regards,
Ed

Expedition Northeast 1999

14 March [we slept in Recife, PE]
flight VARIG 700 RIO-RECIFE 17:00.

15 March [we slept in Campina Grande, PE]
Points 1, 2 and 3.

Point 01) PERNAMBUCO. Road BR 101. Igarassú (7° 49' 60S 34° 53' 60W). 2 km N from center of town.

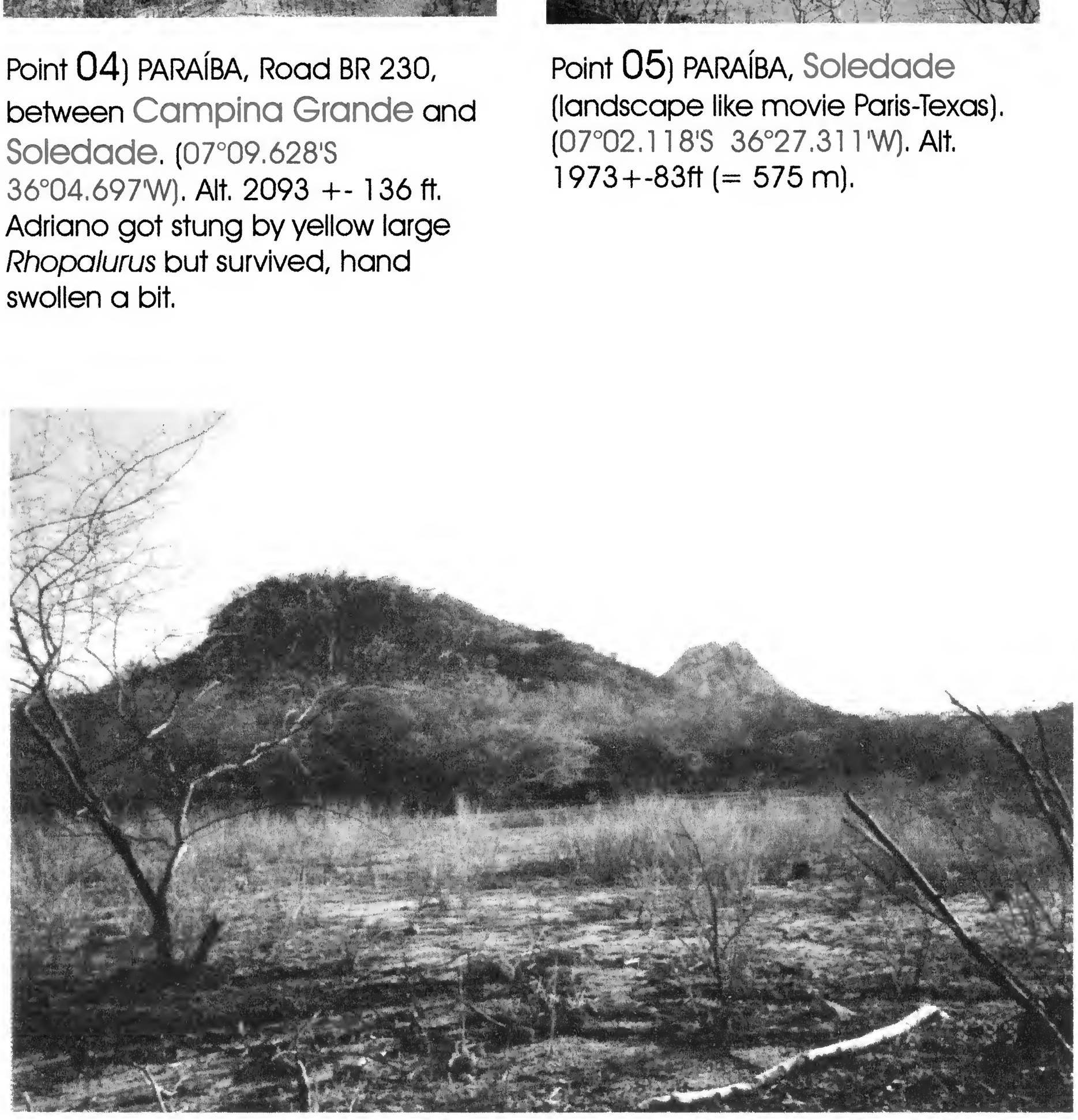
Point 02) PERNAMBUCO. Road BR 101 going north to Goiana. (07° 36.039'S 34°58.869'W).

Point 03) PARAÍBA, Gurinhém, TV tower SBT top of hill. (07°11.428'S 35°24.469'W). Alt. 1014+-133 ft.

16 March [we slept in Patos, PB]
Points 4, 5 and 6.

Point 04) PARAÍBA, Road BR 230, between Campina Grande and Soledade. (07°09.628'S 36°04.697'W). Alt. 2093 +- 136 ft. Adriano got stung by yellow large *Rhopalurus* but survived, hand swollen a bit.

Point 05) PARAÍBA, Soledade (landscape like movie Paris-Texas). (07°02.118'S 36°27.311'W). Alt. 1973+-83ft (= 575 m).



Point 06) PARAÍBA, Road BR 230, before Patos, hill, wine bottler "São Brás" and biscuit factory, kind woman with child — we gave her some grapes,. (06°59.083'S 37°13.184'W) Alt. 945+-161 ft (= 300 m).

17 March [we slept in Juazeiro do Norte, CE]
Points 7 and 8

Point 07) PARAÍBA, Road BR 230, São Bentinho, West of Pombal, hill with TV antenna of TELPA. 06°52.638'S 37°43.069'W, Alt. 395 m. We lost Ross, Alessandro climbed the tower, we gave shirt to hunting dog to follow track.

Point 08) No photo. CEARÁ, Road BR 116, 5 km SW red earth. road with cliff, *Pararagadochir*.

18 March [we slept in Picos, PI]: points 9 and 10.

Point 09) CEARÁ, Road CE 090, 2 km of Crato, national protected forest IBAMA. 07°13.698'S 39°28.607'W. Alt 2348 ft (= 805 m). *Scutigera.*

Point 10) CEARÁ, ravines in earthen road to Santana do Cariri, 07°12.373'S 39°40.412'W, Alt. 2354 ft (=750 m).

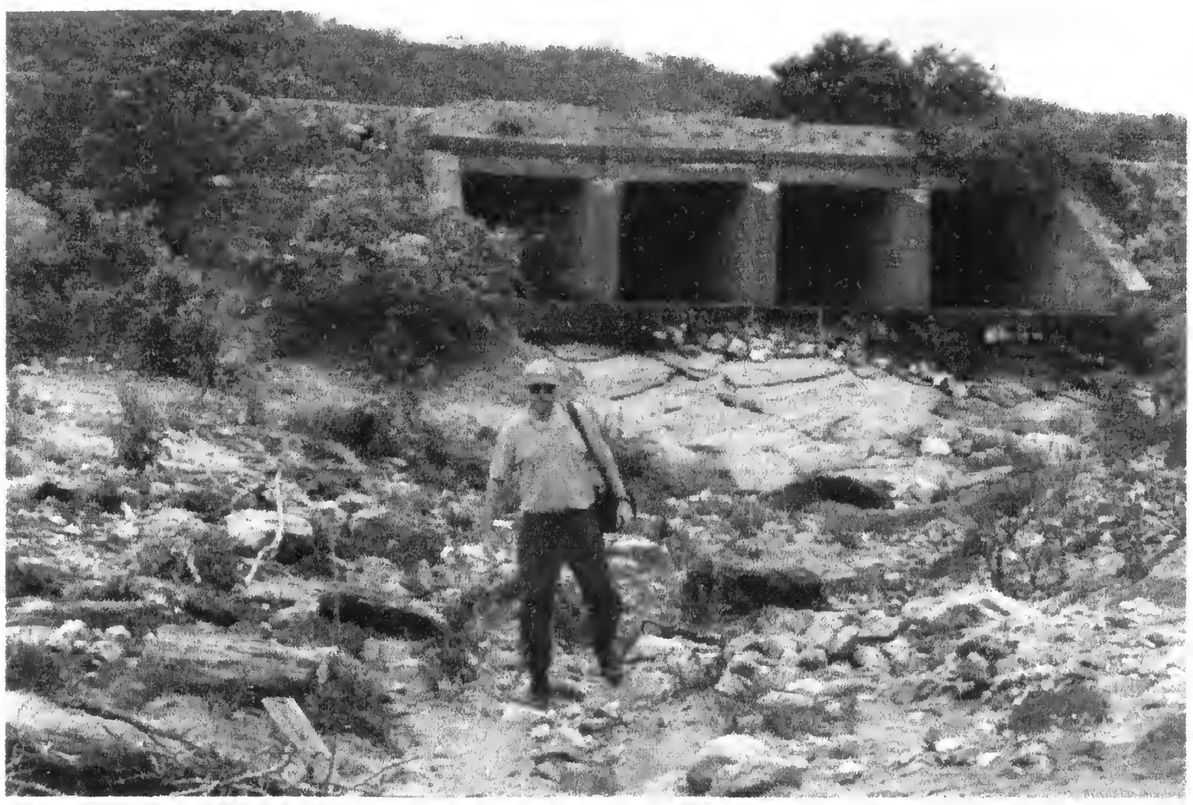
19 March [we slept in Boa Viagem, CE]
Points 11 and 12.

Point 11) PIAUÍ, Road Picos-Bocaina, muddy, Ross waiting. 07°02.375'S 41°26.774'W, Alt. 600 ft (= 220 m).

Point 12) CEARÁ, Road BR 020, Parambu, Cachoeira do Calista, old woman pretensely sick got a ride. 06°27.659'S 40°42.464'W, Alt. 1697+-273 ft (= 490 m).

20 March [we slept in Fortaleza, CE]: point 13.

Point 13) CEARÁ, Itatira, road Lagoa do Mato to Mina de Urânio. 04°35.967'S e 39°44.870'W, Alt. 1704+- 202 ft (= 420 m). *Trichodamon* and *Venezillo*.



21 March [we slept in Crateús, CE]: point 14

Point 14) CEARÁ, Fortaleza, Parque do Cocó, swampy, much disturbed. 03°45.207'S e 38°29.197'W. Alt. 0 m. Adriano's sister.

22 March [we slept in Picos, PI]: points 15 and 16.

Point 16) PIAUÍ, Road BR 316, km 277, between Dom Expedito Lopes and Gaturiano, Municí pio Dom Expedito Lopes, Alpes do Burity, bottler of mineral water Manaíra. 06°57.175'S 41°42.582'W. Alt. 1625+-241 ft (= 360 m).

Point 15) CEARÁ, Road BR 020 a 38 km NE de Tauá, Município Tauá (6° 0' 0S 40° 16' 60W). Distrito Barra Nova, Cachoeira Grande. Alt 430 m. Ross photographed family with three similar sisters and brunette girl. Old woman instant embiid collector. *Scutigera*.

23 March [we slept in Floriano, PI]: points 17 and 18.

Point 17) PIAUÍ, Road BR 230 between Oeiras and Nazaré, large tree, cerradão [= thick savannah]. 06°58.805'S 42°29.304'W. Alt. 220 m.

Point 18) MARANHÃO, Barão de Grajaú, just crossing bridge of river Parnaíba from Floriano. 06°43.390'S 43°06.284'W. Alt = 125 m.

24 March [we slept in Petrolina, PE]: points 19 and 20.

Point 19) No photo. PIAUÍ, Road BR 324, 14 km N São Raimundo Nonato. 08°54.062'S 42°44.525'W. Alt. 400 m. Near National Park with cave paintings, everything forbidden...

Point 20) BAHIA, Casa Nova. Sandy earth. 09°17.167'S 41°28.104'W, Alt. 440 m.

25 March [we slept in Caruarú, PE]: point 21.

Point 21) PERNAMBUCO, Road BR 428, Cabrobó, Telephone tower with police aid. Drugs dealers infested the road. 08°25.061'S 39°11.129'W, Alt. 420 m.

26 March [we slept in Caruarú, PE]: point 22.

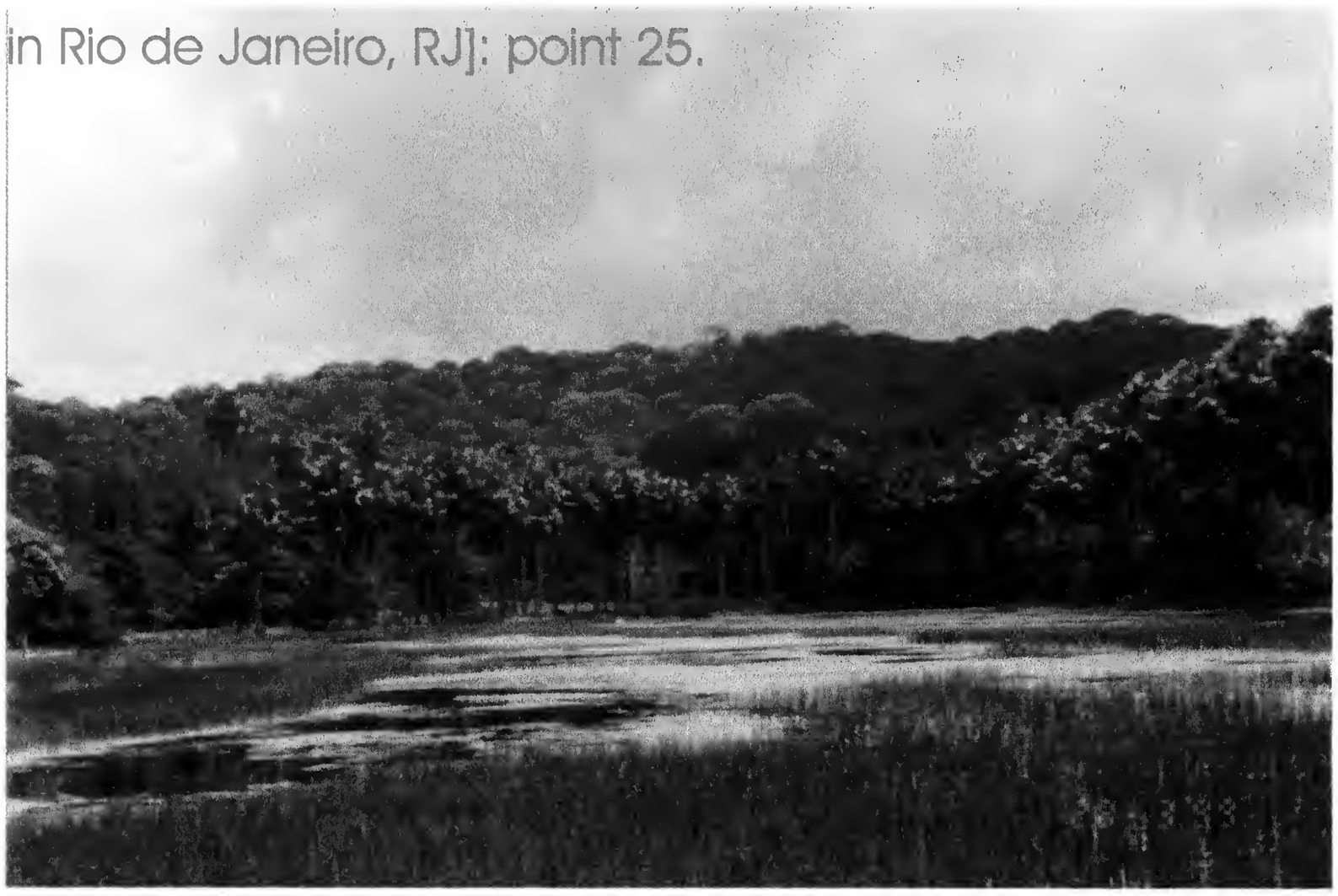
Point 22) PERNAMBUCO. Caruarú, Serra dos Cavalos, Fazenda Santa Maria, 6 km of Murici. Mata Atlântica. 08°22.682'S 36°01.928'W, Alt. 3706 ft (= 770 m).

27 March [we slept in Recife, PE]: points 23 and 24.

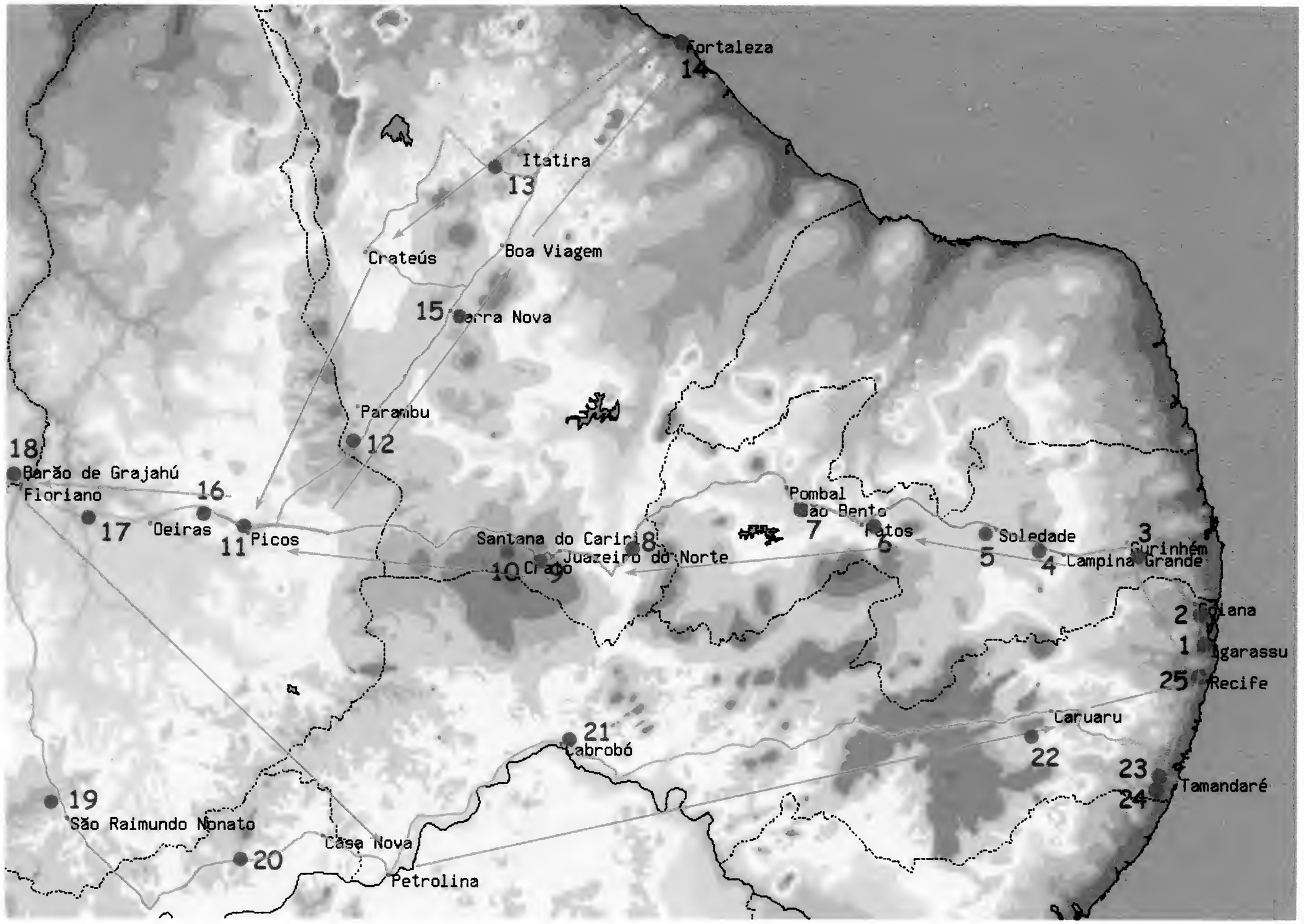
Point 23) PERNAMBUCO, 3 km North of Rio Formoso, near Tamandaré. 08°39.260'S 35°10.209'W, Alt. 1000 m. Slope by a brook. Edward caught a couple of harlequin beetles (*Acrocinus*).

Point 24) No photo. PERNAMBUCO. Small road to Tamandaré, ravines with fruit stands and polluted river. 08°43.881'S 35°10.572'W, Alt. 3704 ft (=1020 m).

28 March [we slept in Rio de Janeiro, RJ]: point 25.



Point 25) PERNAMBUCO. Recife. State Park Dois Irmãos. (08° 03' 0S 34° 54'W). Nice old houses. Collaboration from locals.


Fortaleza
14
Itatira
13
Crateús
Boa Viagem
15
Serra Nova
Paramibu
12
18
Barão de Grajahú
Floriano
16
17
Oeiras
Picos
11
Santana do Cariri
8
Juazeiro do Norte
Crato
10
9
Pombal
São Bento
7
Patos
6
Soledade
5
Campina Grande
4
3
Curinhém
2
Goiana
1
Igarassu
25
Recife
Caruaru
22
21
Cabrobó
23
24
Tamandaré
19
São Raimundo Nonato
Casa Nova
20
Petrolina

California Academy of Sciences

Department of Entomology

Title: CONTRIBUTION TO A SURVEY OF INSECTS OF THE ORDER EMBIIDINA (EMBIOPTERA), OCCURRING IN BRASIL

Researcher: Edward S. Ross, Ph. D., Curator Emeritus, Department of Entomology, California Academy of Sciences, San Francisco, CA 94118.

Proposed Activity: To collect and culture embiids in the vicinity of Rio de Janeiro, the São Paulo region, and in the states of Paraná, Santa Catarina, and possibly in Rio Grande do Sul. Some specific localities of interest are Campo Largo, east of Curitiba and Itajai, in coastal Santa Catarina.

It would be desirable for Brasil and for world knowledge of this insect order if I could have "blanket" permission to extend this, and any future surveys, to other regions of Brasil, particularly to the northeast where there is a complete void in knowledge of the embiid fauna. I have no definite intention to visit the northeast at this time, but would like freedom to extend the survey if, unexpectedly, the opportunity develops.

The proposed surveys would take place during March 1999.

Qualifications: I bring to this survey more than sixty years of worldwide experience in field and laboratory studies of Embiidina, including many trips to other regions of South America. I am the only person with such a broad background. No embiid specialist, past or present, exists in Brasil.

My other expertise is in the field of insect photography and it would be possible for resultant photographs to have use in education and museum exhibits in Brasil.

Special Advantages to Brasil: Specimens of embiids, including holotypes of Brasilian species, will be deposited in the National Museum in Rio and the Zoological Museum, University of São Paulo. There will also be specimens, including paratypes, from other Neotropical regions.

I will also make contacts with appropriate Brasilian institutions and scientists for an exchange of ideas and techniques.

Conclusion: I hereby request permission to collect and export live cultures of Embiidina from, if possible, any region of Brasil. It should be noted that embiids have no economic importance and that culturing is essential because so many species are immature, or upon field encounter, are represented only by females. Adult males essential to research and adequate quantities of specimens can only be secured by culturing.

I have received collecting and exit permission from other countries I have visited, and I have a U.S. Department of Agriculture permit to import such cultures into the United States.

Your favorable response to this request will be very much appreciated.

Yours sincerely,

Edward S. Ross

Edward S. Ross
Curator Emeritus
Department of Entomology

September 1, 1998

EDWARD S. ROSS

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13 - XI - 00

Dear Adriano:

I delayed thanking you for the great treatment of our NE Brazil expedition until I could send you the first parts of EMBIA. These cover generalities. Future parts, some to appear later this year, will deal with systematics and validate names of many Brazilian species. Szumik's head will "swim" — or will she wet her pants!

The big species we collected at "Point 16" (what a wonderful place!) proved to be a n. sp. of genus Beguembia Szumik which she based on very few specimens from SE Brazil and Argentina.

Unfortunately, the large species I made a special effort to collect from the cliff (near fruit stand) W of Curitiba died in the cultures (due to virus?) before any adult males matured. I hope to try again but doubt if I can ever visit Brazil again due to increased ~~shortage~~ regulations against collecting by aliens (and my "old age" and work I must do here).

Hope life is OK with you. I will always fondly recall our time together in the field.

Sincerely,
Ed

HOME (415) 383-5343
HOME FAX (415) 381-9214

Prof. Dr. Adriano B. Kury e-mail adrik@ax.apc.org Tel (021) 537-4376
Departamento de Invertebrados, Museu Nacional/UFRJ Fax (021)568-1314 ext.213
Quinta da Boa Vista, Sco Cristsvco. 20940-040, Rio de Janeiro - RJ - Brazil

GOLDEN GATE PARK

September 2, 1998

Dr. Andriano Kury
Museum Nacional
Rio

Dear Adriano and Leila:

We are looking forward to good times together in Ecuador. We keep a Toyota Landcruiser at Aliñahui and, if it is functional, we can collect in a number of different places in the upper Rio Napo region.

I hope that the transmitted documents will serve our needs. Our invitation isn't an official government one, but may help. Onore might be helpful in getting a collecting/export permit. I really need a new one myself but may try to use my old ones. The only problem might be at airport departure. However, the inspectors don't always check one's carry-on baggage. For me, the problem in getting a new permit is that it is impossible, because of prolonged research time, to satisfy the requirements of earlier permits.

Onore may help you with an invitation from his university but it, and Ecuador's national museum, have no official relationship. In fact, there is rivalry! Onore's address is: G. Onore, P.U.C.E., Apartado 17.01.2184, Quito, Ecuador. He is a wonderful person and we will all have a big dinner together when we are in Quito. It is therefore important that we arrive in Quito about the same time and travel together to Aliñahui in the same vehicle. We expect to be in Quito about the 29th of January and depart for the "jungle" just a few days later.

I hope that you can get the Brasil permit. It would be silly if there are difficulties. I will be carrying with me some holotypes and other specimens (mostly paratypes) from earlier trips to Brasil, and other SA countries, to present to your museum and Sao Paulo. You will note that, ideally, I should have a broad permit, without date restrictions, for all of Brasil (to cover future trips). A side trip during late March to good places in the northeast (Recife area) actually would be more rewarding than proposed travel in the south. Is March a good biological season in the NE? Do you know of good natural areas? I am financially prepared to rent a car in an appropriate NE city and drive along the roads stopping at random at good embiid sites, as I usually do in any country. It would be helpful, at my expense, to have a Brasilian with me, ideally, Vitor Becker (if willing and able) who is, of course, bilingual. We have a great field relationship. You may have other suggestions.

We will keep in touch,

Sincerely,

Ed

Edward S. Ross
Curator Emeritus
Dept. of Entomology